

WHAT IS CLAIMED IS:

1. A motor comprising:

a first compartment;

a second compartment;

a frame;

a first and a second end shield disposed adjacent opposing ends of said frame to define said first compartment;

an armature shaft extending between said first and second end shields;

a stator winding supported by said frame within said first compartment;

an armature rotatably supported by said end shields and disposed within said first compartment adjacent said stator winding;

a cover comprising a first end, a peripheral edge, and ventilation openings, said cover peripheral edge mounted to said motor adjacent said second end shield, said ventilation openings comprising a plurality of openings positioned along at least part of said cover peripheral edge and in said cover first end; and

a switchboard mounted to said second end shield to define said second compartment between said switchboard and said second end shield, said switchboard comprising a mounting means for securing a plurality of electrical components.

2. A motor in accordance with Claim 1 wherein said cover further comprises a plurality of ventilation openings positioned along at least a portion of said cover peripheral edge, said cover peripheral edge ventilation openings extending substantially parallel to said shaft toward said cover first end.

3. A motor in accordance with Claim 2 wherein said second end shield comprises at least one opening in flow communication with said cover peripheral edge

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ventilation openings, said opening for channeling cooling air from said first compartment into said cover.

4. A motor in accordance with Claim 3 wherein said cover further comprises a plurality of ventilation openings extending through said cover first end, said cover first end ventilation openings extending substantially perpendicular to said shaft, and in flow communication with said cover peripheral edge ventilation openings.

5. A motor in accordance with Claim 1 wherein said cover peripheral edge contacts at least a portion of said switchboard and said second end shield.

6. A motor in accordance with Claim 1 wherein said cover comprises a molded plastic element having a generally cup-shaped cross-section.

7. A motor in accordance with Claim 6 wherein said cover further comprises a shield integrally molded with an interior surface of said cover, said cover shield configured to shield said armature shaft.

8. A two compartment motor comprising:

a frame;

a first and a second end shield disposed adjacent opposing ends of said frame to define a first compartment;

a stator winding supported by said frame within said first compartment;

an armature rotatably supported by said end shields within said first compartment;

a cover comprising a plurality of cooling openings, said cover mounted to said motor adjacent said second end shield; and

a switchboard mounted to said second end shield to define said second compartment between said switchboard and said second end shield, said switchboard

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comprising a mounting means for securing a plurality of electrical components thereto.

9. A two compartment motor in accordance with Claim 8 wherein said switchboard is molded, said switchboard mounting means integrally molded with said switchboard.

10. A two compartment motor in accordance with Claim 8 wherein said second end shield further comprises at least one of an opening for providing access to an interior of said second compartment, said opening sized to receive at least one electrical conductor therethrough, a plurality of integrally formed cooling openings in flow communication with said cover ventilation openings for channeling cooling air toward and from said motor, and an integrally formed guard to facilitate reducing unintended contact between said armature and said plurality of electrical components within said second compartment.

11. A two compartment motor in accordance with Claim 8 wherein at least one of said electrical components comprises a starting capacitor, said switchboard comprising an integrally molded recess area for securing said starting capacitor to said switchboard.

12. A two compartment motor in accordance with Claim 8 wherein said plurality of electrical components comprises at least a speed selection switch, at least a portion of said speed selection switch integrally molded with said switchboard.

13. A two compartment motor in accordance with Claim 8 wherein said plurality of electrical components comprises at least a voltage selection switch, at least a portion of said voltage selection switch integrally molded with said switchboard.

14. A two compartment motor in accordance with Claim 8 wherein said plurality of electrical components comprises at least an overload device, said switchboard comprises an integrally formed means for mounting said overload device.

15. A two compartment motor in accordance with Claim 8 wherein said switchboard comprises a recess for receiving electrical connectors to couple said stator winding to at least one electrical component mounted on said switchboard.

16. A two compartment motor in accordance with Claim 8 further comprising first and second mating electrical connectors, said first connector electrically coupled to at least one electrical conductor coupled to said switchboard, said second connector electrically coupled to said stator winding, said switchboard comprises a recess adapted to receive said mated first and second connectors.

17. A two compartment motor in accordance with Claim 8 wherein said armature comprises a shaft extending into said second compartment, said motor further comprising a centrifugal switch assembly comprising a rotatable portion coupled to said shaft.

18. A two compartment motor in accordance with Claim 17 wherein said switchboard comprises an integrally molded recess portion for receiving and shielding at least a portion of said centrifugal switch assembly.

19. A two compartment motor in accordance with Claim 18 wherein said switch assembly further comprises an actuator portion, said switchboard further comprises an integrally formed mounting means for securing said actuator portion.

20. A two compartment motor in accordance with Claim 8 wherein said second end shield comprises a central portion, a circumferential rim portion, a plate portion extending therebetween, and a plurality of spokes extending radially outwardly from said central portion.

21. A two compartment motor in accordance with Claim 20 wherein said second end shield further comprises at least one opening between said central portion and said circumferential rim portion and between said spokes, said opening in flow communication with said cover cooling openings such that cooling air flows to and from said motor.

22. A motor comprising:

a first compartment defined between a first end shield and a second end shield;

a second compartment;

a cover having ventilation openings mounted adjacent said second end shield;
and

a switchboard assembly comprising a switchboard mounted to said second end shield to define said second compartment.

23. A motor in accordance with Claim 22 wherein said motor further comprises a frame extending between said first end shield and said second end shield defining said first compartment, and an armature shaft extending between said first and second end shields.

24. A motor in accordance with Claim 23 wherein said motor further comprises a stator winding supported by said frame within said first compartment, and an armature rotatably supported by said end shields and disposed within said first compartment adjacent said stator winding.

25. A motor in accordance with Claim 22 wherein said switchboard assembly comprises a plurality of electrical components for controlling said motor, and a mounting means for securing said electrical components in position on said switchboard.

26. A motor in accordance with Claim 22 wherein said switchboard assembly comprises a switch having a movable portion and a stationary portion.

27. A motor in accordance with Claim 26 wherein said switch stationary portion comprises at least one electrical terminal mounted in said switchboard and adapted for mating with a conductor in said movable portion.

28. A motor in accordance with Claim 26 wherein said switch has an engaged position wherein said movable portion is electrically engaged with said stationary

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portion, and a disengaged position wherein said movable portion is rotatable relative to said stationary portion.

29. A motor in accordance with Claim 26 wherein said switch has a first and second engaged positions wherein said movable portion is electrically engaged with said stationary portion, and a disengaged position wherein said movable portion is selectively movable between said first and second engaged positions.

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